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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
08 973,381	03 25 1998	NORMAND HEBERT	ISIS-2297	6836

7590 05 21 2002  
MICHAEL P STRAHER  
WOODCOCK WASHBURN KURTZ  
MACKIEWICZ & NORRIS  
ONE LIBERTY PLACE 46TH FLOOR  
PHILADELPHIA, PA 19103

EXAMINER

MARSCHER, ARDIN H

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 05 21 2002

27

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

08/973,381

Applicant(s)

Hebert

Examiner

Ardin Marschel

Art Unit

1631



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12/27/01 and 2/21/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-8, 10-14, 16-20, and 22-30 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-8, 10-14, 16-20, and 22-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on Dec 27, 2001 is: a) ☒ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)           | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No.:          |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No.: | 6) <input type="checkbox"/> Other:  |

Applicants' arguments, filed 12/27/01 and 2/21/02, have been considered and they are deemed to be persuasive to overcome the previous rejections of record. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. Upon reconsideration, however, the following rejections and/or objections are newly applied. They constitute the complete set presently being applied to the instant application.

If applicant desires priority under 35 U.S.C. § 120 based upon a previously filed copending application, specific reference to the earlier filed application must be made in the instant application. It is noted that this appears as the first sentence of the specification following the title. The status of non-provisional application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. \_\_\_\_\_" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Only combinatorial libraries are cited in the present title whereas the claims also include oligomers and methods of preparation.

Claims 2-8, 10-14, 16-20, and 22-30 are rejected, as discussed below, under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The independent claims 27-30 all confusingly contain two structures designated as III making the antecedent basis unclear as to what III is meant in references to structure III later in each claim. Claim 27, for example, in the last line. Claim 27, line 3, also refers to "one of the structures I, II, III, IV, V or VI" whereas there is no structure V depicted therebelow. This unclarity is similarly in the other independent claims as those dependent therefrom due to their dependence.

Claim 30 is additionally unclear as to method step designations in that there are TWO(2) steps designated as(h) in the last 6 lines of claim 30.

The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to

be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 16-20, 22-26, 29, and 30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 23 and 24 of U.S. Patent No. 5,714,606 in view of either of Letsinger et al. (U.S. Patent No. 5,112,962) or Smith et al. (U.S. Patent 5,015,733). The instant independent claims 29 and 30 are directed to the synthesis of oligomers of aminodiols having the structures cited in these claims including structure III (first occurrence in each of claims 29 and 30). These oligomers are synthesized via monomer additions as in claims 23 and 24 of U.S. Patent 5,714,606 but with the difference that synthesis is carried out on a solid support in the instant methods with cleavage from said support at the end of the instant claims. It is noted that such solid support synthesis with cleavage at the end of the completed oligomer is well known in oligomer synthesis, especially for oligomers of the nucleotide or nucleotide analog type. The U.S. Patents of Letsinger et al. and Smith et al. are cited as supporting this well known oligomer synthesis technique on a solid support as well as cleavage of the final product from said support. Smith et al. summarizes and motivates such solid support synthetic methods in column 2, lines 19-47, and as

depicted in Figure 3 in columns 3-4. Protecting groups as well as cleavage methods including base usage for said final cleavage is also motivated and summarized in column 5, line 67, through column 6, line 18. Similarly, Letsinger et al. depicts solid phase oligomer synthesis on the cover of the Patent and taken as a whole summarizes various labile anchors to improve the desired solid support cleavage reaction thus further motivating this practice. The differential ordering of a few steps as performed in instant claim 16-20, for example, are deemed obvious variations given the open claim language in the claims of the Acevedo et al. Patent. It is lastly noted that the above listed instant claims do not contain the limitation that at least one monomeric unit not be of the structure III type as the instant composition claims do.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

Claims 16-20, 22-26, 29, and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Acevedo et al. (P/N 5,714,606), taken in view of either of Smith et al. (P/N 5,015,733) or Letsinger et al. (P/N 5,112,962).

This rejection is based on the different inventorship for Acevedo et al. versus the instant application. The instant independent claims 29 and 30 are directed to the synthesis of oligomers of aminodiols having the structures cited in these claims including structure III (first occurrence in each of claims 29 and 30). These oligomers are synthesized via monomer additions as in claims 23 and 24 of U.S. Patent 5,714,606 but with the difference that synthesis is carried out on a solid support in the instant methods with cleavage from said support at the end of the instant claims. It is noted that such solid support synthesis with cleavage at the end of the completed oligomer is well known in oligomer synthesis, especially for oligomers of the nucleotide or nucleotide analog type. The U.S. Patents of Letsinger et al. and Smith et al. are cited as supporting this well known oligomer synthesis technique on a solid support as well as cleavage of the final product from said

support. Smith et al. summarizes and motivates such solid support synthetic methods in column 2, lines 19-47, and as depicted in Figure 3 in columns 3-4. Protecting groups as well as cleavage methods including base usage for said final cleavage is also motivated and summarized in column 5, line 67, through column 6, line 18. Similarly, Letsinger et al. depicts solid phase oligomer synthesis on the cover of the Patent and taken as a whole summarizes various labile anchors to improve the desired solid support cleavage reaction thus further motivating this practice. The differential ordering of a few steps as performed in instant claim 16-20, for example, are deemed obvious variations given the open claim language in the claims of the Acevedo et al. Patent. It is lastly noted that the above listed instant claims do not contain the limitation that at least one monomeric unit not be of the structure III type as the instant composition claims do.

Thus, it would have been obvious to someone of ordinary skill in the art at the time of the instant invention to practice the Acevedo et al. synthesis in view of either of Letsinger et al. or Smith et al., both of which supply suggestion and motivation to utilize solid phase synthetic methods in oligomer synthesis thus resulting in the practice of the instant invention.

No claim is allowed.



Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR § 1.6(d)). The CM1 Fax Center number is either (703)308-4242 or (703)305-3014.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., whose telephone number is (703)308-3894. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (703)308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to Patent Analyst, Tina Plunkett, whose telephone number is (703)305-3524 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

May 17, 2002

*Ardin H. Marschel*  
ARDIN H. MARSCHEL  
PRIMARY EXAMINER